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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,380	03/30/2004	Paul James Buriak	2004B020	4679

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ExxonMobil Chemical Company  
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EXAMINER
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AUGHENBAUGH, WALTER

ART UNIT	PAPER NUMBER
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1772

MAIL DATE	DELIVERY MODE
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09/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/813,380	<b>Applicant(s)</b> BURIAM ET AL.	
	<b>Examiner</b> Walter B. Aughenbaugh	<b>Art Unit</b> 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 1-31 and 56-63 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32-55 and 64 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/30/04, 7/06/05</u> | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. New claim 64 presented in the Amendment filed July 2, 2007 (Amdt. A) has been received and considered by Examiner.
2. Claims 1-31 are incorrectly labeled as “(Original)” in Amdt. A: claims 1-31 are withdrawn.
3. Claim 34 is incorrectly labeled as “(Withdrawn)” in Amdt. A: claim 34 is drawn to elected subject matter.

### ***Election/Restrictions***

4. Applicant's election with traverse of Group I, claims 1-55, in the reply filed on July 2, 2007 is acknowledged. The traversal is on the ground(s) that restriction between the two Groups “will lead to duplicative searching and prosecution”. This is not found persuasive because an undue burden would be imposed to search both Groups because a search of both Groups would require a search in two separate areas of classification.

The requirement is still deemed proper and is therefore made FINAL.

5. Applicant's election without traverse of the second species in the reply filed on July 2, 2007 is acknowledged.

### ***Claim Rejections - 35 USC § 102***

6. Claims 32-34, 37-41, 45-50 and 64 are rejected under 35 U.S.C. 102(b) as being anticipated by Kitami et al. (USPN 5,362,530).

In regard to independent claim 32, Kitami et al. teach a reinforced multilayer pipe (col. 1, lines 10-14 and entire document) comprising a first thermoplastic tubular structure (inner peripheral wall of inner layer, col. 2, lines 56-61), a second thermoplastic tubular structure (outer

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peripheral wall of inner layer, col. 2, lines 61-66) covering the first thermoplastic tubular structure, a reinforcing structure (col. 5, lines 38-48) covering the second thermoplastic tubular structure and a barrier layer disposed between the first thermoplastic tubular structure and the second thermoplastic tubular structure (col. 5, lines 49-51 and col. 7, lines 52-55). An additional layer in the “core of a multilayered structure” (col. 7, lines 53-54), that is located between the inner and outer walls of the inner layer of the second embodiment (which falls within the scope of the teachings at col. 5, lines 49-51 and col. 7, lines 52-55), corresponds to the claimed barrier layer because any additional layer would serve as a barrier layer because the additional bulk of the layer would further retard the permeation of gas through the multilayer structure as compared with the multilayer structure without the additional layer. The barrier layer taught at col. 5, lines 49-51 and col. 7, lines 54-55, that is located between the inner and outer walls of the inner layer of the second embodiment (which falls within the scope of the teachings at col. 5, lines 49-51 [particularly, “... may be assembled into the hose...”] and col. 7, lines 52-55), also corresponds to the claimed barrier layer.

In regard to independent claim 45, Kitami et al. teach the reinforced multilayer pipe as discussed above in regard to claim 32. The tubular article of Kitami et al. corresponds to the claimed well tubing joint because no additional structure over the pipe of claim 32 is recited in claim 45. Note that an appropriate sized tubular article of Kitami et al. would serve as a joint between two appropriately sized lengths of tubing of Kitami et al. that are arranged end to end (where the tubular article that corresponds to the joint has an inner diameter such that the joint fits tightly over the outer surfaces of the two lengths of tubing of Kitami et al. that are arranged

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end to end). The reinforcing structure (col. 5, lines 38-48) of Kitami et al. corresponds to the claimed rigid tubular section.

In regard to independent claim 64, Kitami et al. teach the reinforced multilayer pipe as discussed above in regard to claim 32. The reinforcing structure (col. 5, lines 38-48) of Kitami et al. corresponds to the claimed rigid tubular section.

In regard to claims 33 and 50, since the first thermoplastic tubular structure, second thermoplastic tubular structure and barrier layer are components of a multilayered laminate that does not include a layer that cannot be coextruded along with polymeric film layers (such as the reinforcing layer, which is outside of the multilayered laminate that includes first thermoplastic tubular structure, second thermoplastic tubular structure and barrier layer), this structure corresponds to a structure that would result from coextrusion of the materials of each of these layers to form these layers (col. 2, lines 56-66, col. 5, lines 38-48, col. 5, lines 49-51 and col. 7, lines 52-55).

In regard to claim 34, Kitami et al. teach that polyamides (and nylons: nylons are polyamides) are suitable stress crack barrier materials (col. 5, lines 49-51, col. 7, lines 52-55 and col. 6, lines 15-26).

In regard to claims 37 and 49, Kitami et al. teach that the reinforcing structure of Kitami et al. is a steel tubular (col. 5, lines 38-48).

In regard to claims 38-41, the recitations “drill well”, “production tubing”, “production casing” and “sewer line” are intended use recitations that have been given little patentable weight, since it has been held that a recitation with respect to the manner in which a claimed article is intended to be employed does not differentiate the claimed article from a prior art

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article satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQd 1647 (1987).

The only structure positively recited in claims 38-41, a tubular (from claims 38-41) pipe (from claim 32) is met by the structure of the tubular article of Kitami et al.

In regard to claim 46, Kitami et al. teach that the each of the materials recited in claim 46 are suitable materials for the first and second thermoplastic tubular structures (col. 6, lines 9-52).

In regard to claims 47 and 48, Kitami et al. teach that the each of the materials recited in claims 47 and 48 are suitable materials for the first and second thermoplastic tubular structures (col. 6, lines 9-52).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 35, 36, 42, 43, and 51-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitami et al. (USPN 5,362,530).

Kitami et al. teaches the tubular structure (and well tubing joint) as discussed above in regard to claims 32 and 45.

In regard to claims 35, 36 and 51-53, Kitami et al. fail to explicitly teach that the barrier layer has the claimed carbon dioxide permeabilities.

Kitami et al., however, disclose that the stress crack barrier material has improved impermeation to Freon gases (col. 6, lines 15-26). Kitami et al. also disclose that the thicknesses of the core layer (which includes the barrier layer: col. 5, lines 49-51 and col. 7, lines 52-55) may be varied to control the permeation of the gases (Fig. 1-9). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have varied the thickness of the barrier layer in order to achieve the desired degree of carbon dioxide permeability, depending on the particular desired end result, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art in the absence of unexpected results. MPEP 2144.05 II.B.

In regard to claims 42, 43, 54 and 55, Kitami et al. fail to explicitly teach that the barrier layer has the claimed thicknesses. Kitami et al. also disclose that the thicknesses of the core layer (which includes the barrier layer: col. 5, lines 49-51 and col. 7, lines 52-55) may be varied to control the permeation of the gases and the flexibility of the hose (Fig. 1-9, col. 7, lines 52-55 and col. 11, lines 46-49). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have varied the thickness of the barrier layer in order to achieve the optimal balance of carbon dioxide permeability and hose flexibility, depending on the particular desired end result, since it has been held that discovering an optimum value of a

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result effective variable involves only routine skill in the art in the absence of unexpected results.

MPEP 2144.05 II.B.

9. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitami et al. (USPN 5,362,530) in view of Flepp et al. (USPN 6,555,243).

Kitami et al. teaches the tubular structure as discussed above in regard to claim 32.

Kitami et al. fail to explicitly teach that the barrier layer comprises an ethylene vinyl alcohol copolymer.

Flepp et al., however, disclose that ethylene/vinyl alcohol copolymers (EVOH) are known barrier materials for nonpolar and polar solvents that must be an intermediate layer in a multilayer tube for protection from moisture (col. 2, lines 50-60), and Flepp et al. disclose a tube comprising an EVOH intermediate layer (see entire document). Therefore, one of ordinary skill in the art would have recognized to have used EVOH as the material of the barrier layer of Kitami et al. since EVOH is a well known barrier material for nonpolar and polar solvents that must be an intermediate layer in a multilayer tube as taught by Flepp et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used EVOH as the material of the barrier layer of Kitami et al. since EVOH is a well known barrier material for nonpolar and polar solvents that must be an intermediate layer in a multilayer tube as taught by Flepp et al.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B. Aughenbaugh whose telephone number is (571) 272-



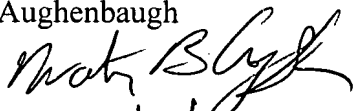
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1488. While the examiner sets his work schedule under the Increased Flexitime Policy, he can normally be reached on Monday-Friday from 8:45am to 5:15pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Walter B. Aughenbaugh  
9/17/07

  
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